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VICTORIAN ENTOMOLOGIST



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NEWS BULLETIN of

**The ENTOMOLOGICAL
SOCIETY of VICTORIA**



(the ENTOMOLOGICAL SOCIETY of VICTORIA (Inc)

MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary Membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

OBJECTIVES

The aims of the Society are:

- (a) to stimulate the scientific study and discussion of all aspects of entomology,
- (b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
- (c) to compile a comprehensive list of all Victorian insect species
- (d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

MEETINGS

The Society's meetings are held at Clunies Ross House, National Science Centre, 191 Royal Parade, Parkville, Victoria, at 8 pm on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

SUBSCRIPTIONS

Ordinary Member.....	\$10.00
Country Member	\$ 8.00 (100 km + from GPO)
Student Member	\$ 5.00
Associate Member.....	\$ 2.00 (No Magazine)

No additional fee is payable for overseas posting by surface mail of the news bulletin. Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

MINUTES OF THE GENERAL MEETING, APRIL 21 1989

The President opened the meeting at 8.05 pm.

Apologies: J. Field, M. Le Souef.

Present: R. Adair, G. & Joy Burns, John Burns, P. Carwardine, K. Clark, M. & P. Coupar, D. & M. Crosby, L., K. & J. Dunn, R. Field, R. & J. Fisher, R. Gordon, V. Himmelreich, D. & J. Holmes, M. Hunting, P. Kelly, G. & D. Krake, T. New, J. Reid, K. Roach, B. Vardy.

Minutes of the February General Meeting (Vic. Ent. 19: 26-27) were passed (John Burns/Clark).

K. Walker then introduced Mr R.H. Fisher, winner of the Zoo Le Souef Memorial Award for 1988. In doing so, Ken recounted the history of the Award, and paid tribute to Bob Fisher's work on butterflies over many years. The presentation was greeted with applause, and the winner then addressed the Society on 'Butterfly Photography'. The talk was illustrated by numerous excellent slides, and many practical hints on technique were given. After questions and discussion, a vote of thanks was proposed by M. Hunting.

Correspondence. Detailed and received. (Kelly/Joy Burns)

Treasurer's Report. G. Burns reported credit balances of \$2303.06 (General Account), \$1831.24 (Memorial Account) and \$421.61 (Junior Encouragement Fund). There are at present 70 financial members. Received (Field/John Burns)

Editor's Report. John Burns reported on production of Vol. 19 (2), and requested articles, and short notes as space-fillers, for future issues. Received (D. Crosby /Carwardine).

Excursions. P. Carwardine: possible venues for a winter excursion are the Butterfly House at the Melbourne Zoo, and the Department of Entomology, Museum of Victoria.

General Business

- a) The President drew attention to the nomination forms for all Office Bearers, included in the recent new bulletin.
- b) G. Krake: exhibit of a case of beetles, with request for aid in identification of these.
- c) M. Hunting informed members that copies of Common & Waterhouse 'Butterflies of Australia' are on sale for \$15 at a city bookshop.
- d) K. Clark reported on distribution of Aristolochia by Townsville Council as a butterfly foodplant.
- e) General discussion on a number of recent/current publishing projects on Australian Lepidoptera and other insects.
- f) D. Crosby: comment on recent severe effects of psyllids on Eucalyptus in East Gippsland.
- g) Joy Burns drew attention to a recent article in the Wimmera Mail-Times featuring comments on the Eltham Copper Butterfly by Fabian Douglas.

The meeting closed at 9.40pm.

MINUTES OF THE COUNCIL MEETING, MAY 19 1989

The President opened the meeting at 8.00 pm

Apologies: J. Field

Present: G. & Joy Burns, John Burns, M. & P. Coupar, D. Crosby, R. Field, M. Hunting, P. Kelly, T. New, B. Vardy.

Minutes of the March Council Meeting (Vic. Ent. 19:28) were passed (Crosby/G.Burns).

Correspondence. Detailed and received (Joy Burns/Field).

Treasurer's Report. G. Burns reported credit balances of \$2485.61 (General Account), \$1651.24 (Memorial Fund) and \$421.61 (Junior Encouragement Fund). There are at present 71 financial members. Received (Crosby/Kelly).

Editor's Report. John Burns reported that enough material was to hand for the June issue, but articles and notes were needed for later issues. The initial response to his 'entomological questions' section had been disappointing. Received (Kelly/Field).

General Business

- i) Council's nominations for the Society positions falling vacant at the Annual General Meeting in June are as follows:

President:	M. Hunting
Vice Presidents:	R. Field, P. Kelly
Hon. Secretary:	T. New
Hon. Treasurer:	G. Burns
Hon. Editor:	John Burns
Excursions Secretary:	P. Carwardine
Public Officer:	D. Crosby
Council Members:	Joy Burns, M. & P. Coupar, B. Vardy
- ii) Programme for remainder of 1989 was discussed. August confirmed as short talks by members, October: Dr T.R. New to speak on butterfly variation or conservation, December: members' night, with refreshments to follow.
- iii) Conservation matters.
 - a) The Secretary and D. Crosby tabled a draft 'Conservation Statement' for consideration by Council. This was viewed as preferable to a longer, more discursive policy at this time. After considerable discussion, the Secretary to prepare and circulate a revised version for possible adoption.
 - b) There is some urgency about nominating invertebrates for early consideration under the Flora and Fauna Guarantee. Consideration to be given to this.
 - c) There is some possibility of obtaining government funds to assist in Society conservation-related publications.
- iv) Junior Encouragement Fund. Secretary to follow up suggestion from the Field Naturalists Club of Victoria and contact several Junior groups.

The meeting closed at 9.15 pm.

"BEING WITH NATURE"(INVOLVEMENT WITH THE ARTHROPODS).

ONE OF THE CONDITIONS OF WINNING THE Le Souef Memorial Award is to write an article concerning some aspect of entomological activities. Therefore I have chosen to outline my studies of the insects which has led to the winning of the 1987 J.C. Le Souef Memorial Award. (The recognition of contribution in the field of Amateur Entomology in Australia). The theme chosen for this essay is the emphasis on the important role that other people may play in one's life regarding GUIDANCE and ENCOURAGEMENT. The achievement in any endeavour is often the result of caring persons sharing their experiences and know-how along the way.

I can best begin in the back garden at an early age with the vivid memories surrounding these remarkable creatures. My parents and neighbours being on friendly terms had access to adjoining properties through gates built in the fences. (With compliments from my father, a cabinet-maker by trade). Because of this situation, I had entry to a variety of gardens. Vegetable gardens, fruit trees, flowers and greenhouses. The largest of the four properties was the Aunt's garden on our right, however, our own garden beds were continually filled with vegetables and flowers which my father keenly nurtured throughout the seasons. Given such opportunity of wandering and exploring the area to the heart's content, the insects made their presence known amidst the large variety of plant life available.

THE ENCOURAGEMENT FACTOR:

Interest at this early age was encouraged by my Grandpop. He would catch as many cicadas as could be knocked out of the apple and pear trees with the cobweb broom and would give them to me after snipping half of one of their forewings off with his nail scissors. A four year old was happy enough to accept the colourful large insects yet instinctively realised that it was not a happy moment for the cicadas which desperately struggled to fly away but could not. Curiosity being a characteristic of a healthy child I forever asked Why?, How? etc. However, the first-hand experiences of simply being with nature continually answered a good many questions. One afternoon vividly comes to mind while helping my father in sieving soil in the garden. Anticipation of discovery with every spade of soil turned, a mud-cell (beetle cocoon) suddenly caught our attention. Upon breaking it open we were astounded on finding a brilliant golden-coloured christmas beetle within.

A number of observation-breeding cages were built by my father in which were housed crickets, grasshoppers and locusts (separated families). Generations were reared in these over the years. An especially large cage was constructed to house cicadas each and every summer. This was hung from the ceiling of the back veranda. My father built an insect display tray and a sturdy butterfly net which folded up into a convenient size when not in use. These were presented on my eighth birthday.

My mother was a most talented artist and she was forever encouraging me to draw and to write about the various insects and creatures most commonly found in the garden. The lady beetles, cicadas, grasshoppers, flower-chafers, crickets and butterflies were among the favourites and I would attempt to draw them, depicting them on tree trunks, leaves and flowers. As children will naturally give presents to the people around them, I gave many such drawings to my parents and neighbours. Many people in the neighbourhood were well aware of my love of insects and would present a variety of insects found in one way or another. Many a surprise awaited early daybreak before school in the form of beetles, moths and cicadas placed into an empty cage the evening before.

BEING WITH NATURE. (INVOLVEMENT WITH THE ARTHROPODS).

The lavender blossoms extensively draping the workshop at the rear of a fernery would attract a good number of butterflies during autumn and numerous hours were spent clambering across the roof in pursuit of the variety of species visiting these flowers. Blue Triangles, Pale-blue Triangles, Orchard Swallowtails, Wanderers, Common Browne, Australian Admirals, Meadow Arguses, Pencil Blues, Skippers were commonly seen. For my ninth birthday, my father constructed the framework that was to become my "WILDBUSH FERNERY". This area was some ten metres long by four metres wide. This space was filled with as many native plants that I could find in local paddocks and neglected corners of properties. Most of the plants thrived in this garden and became a haven for all insects that could be "eaved" from an otherwise untimely death, especially the caterpillars of butterflies and moths which were never that popular with anybody I knew. I packed this fernery with as many insects as could be found, beetles, cicadas, grasshoppers and more. Here I watched them grow inside the lattice-work surround. Probably one of the most useful birthday presents ever received was a large silver torch which I used most every evening during spring-summer-autumn. A considerable portion of my pocket money was spent on batteries. With this light it became possible to extend my outdoor hobby with the insects well past sunset. So long as the school homework was completed, I was permitted to spend up to 9.00pm with the torch, collecting cicada nymphs by the shoebox-full from the avenues and local parks as well as the gardens available. The large hawk moths were often seen hovering at convulvulus vines in the paddocks and nightly visits were made to the selected sites of the many large orb-weaving spiders watching them construct their huge snares and netting prey. The fernery thrived regardless of the number of insects introduced and in fact became a "jungle of unruly plants" which actually needed a further pruning at times.

Throughout the schooldays, school chums supplied an over-abundance of various insects. During the late spring-early summer it was not unusual to take home a shoebox-full of green grocer and yellow Monday cicadas or golden Christmas beetles. There were three teachers who fondly come to mind. They greatly encouraged these interests in Nature study, writing and drawing. Mrs Farmer consistently displayed drawings in the classroom and discussed the subjects depicted. Mr Green the English teacher would have the children read aloud their compositions to the class. However, Mr Adams, the Science teacher undoubtedly had the greatest influence concerning the insects. He installed a large display cabinet in the science room. I was given a key and appointed to arrange and label specimens. This cabinet prompted a number of children into collecting insects, seedpods, leaves and more during their holidays. Many of the children happily donated their finds to the display cabinet for the whole school to share.

Frequently my parents would take my sister and I into the city to visit the Australian Museum. (Tony Musgrave and Keith McKeown, Curator and Assistant Curator of Insects respectively). I would peruse the large collection of coleoptera for hours and it was always a treat to throw back the black-cloth covers of the lepidoptera display units and to suddenly reveal the contents within. These cloths were always replaced after looking to prevent the otherwise rapid colour fade that accompanies a good proportion of specimens in a butterfly collection.

BEING WITH NATURE. (INVOLVEMENT WITH THE ARTHROPODS).

One particular visit to the Australian Museum vividly comes to mind, my mother bought a book filled with photographs and drawings of insects of the world for my 10th birthday. This book was titled "Insect Wonders of the World" Sometime later at home searching the pages with gusto and filled with enthusiasm, I recall my thoughts at that time; "somehow, someday I will make a book showing the insects and plants using photographs and writing about them through my own experiences."

My mother passed away in my early teens. I brought her as many living butterflies as I could catch before she died. She would look at them and watch them fly through the opened double-doors back out into the sunlight. It was just two weeks prior to her passing that I found a large population of Tailed Emperor Butterflies feeding at profusive sap-flows of wattle in Earlwood Reserve, now known as Girraween Park, N.S.W. These butterflies seemed to have special significance to both of us at the time as I released a number of them into the back garden, where later they became established.

Throughout this period and into later teens, my father and I made numerous camping trips together to the many choice locations found in N.S.W.. On these trips I would collect a variety of insect species and make notes on observations concerning them. Upon leaving school I applied for an apprenticeship in television cartoon-animation. On presenting my drawings, I was immediately accepted at the studio of my choice. Throughout the years in the animation industry, I learnt a good number of techniques in drawing and film-making yet I had a constant burning desire to see more of Australia. Focus was relentlessly upon this goal so I saved enough money and decided to do just that. I visited north Qld and experienced the typical intoxication often spoken of by those visiting such regions of the lush wilderness of rainforest and wildlife. From here I decided to visit Western Australia. After spending several months working and travelling about the state I returned to Sydney.

During early, 1974 whilst visiting South Australia I met a young lady from Sydney who had earlier made a solo journey on her motor bike, she also wished to see more of Australia. Lynn being a fellow nature-lover we decided to travel together working along the way and sharing the costs. One evening during 1975 while in Sydney, we discovered the existence of the 'Butterfly Farm' situated in Wilberforce, N.S.W., it being advertised in a magazine used in the wrapping of our fish dinner from a local shop. Subsequently, after a visit to this farm we were further inspired to get on with our travels. It was around this time that we additionally discovered the Australian Entomological Supplies, a most reliable service operated by Alan and Dawn Frazer. Alan gave me some names of people involved in entomology and spoke about entomologist's meetings held on the second Tuesday evening of every second month starting from Feb each year. These meetings were held at the Australian Museum in the Hallstrom Theatre. I followed this lead and attended three or four meetings organised by a young man named Greg Daniels, a very keen entomologist who showed a strong interest in Diptera, particularly the family Asilidae. Greg's knowledge of entomology and his enthusiasm toward the subject further encouraged all who attended.

With entomology gear purchased from Alan Frazer I was well equipped for some intensive insect collecting and it was not long before Lynn and I got moving again on our travels. Far north Qld., 1975 a large number of insects were collected while Lynn was evolving her landscape paintings. Victorian Entomologist 19(3) June 1989

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We were learning a good deal from one another through an exchange of viewpoints. Through Lynn I discovered the broader picture namely the habitat and the ecological aspects associated with the lives of the insects, while Lynn discovered the finer details namely insects, leaves & textures. After some months of travelling we returned to South Australia where we first met. During this period whilst working in Adelaide I decided to purchase my first 35mm camera. The very first roll of Ektachrome ASA-100 film was blessed with successful images of the Tailed Emperor Butterfly, Polyura pyrrhus gempronius feeding at a sap flow on the introduced plant: Polygala myrtifolia in Veale Gardens, South Australia.

Once again reorganised for further travelling (money saved), we decided to first visit Tasmania and thereafter New Guinea. We travelled overland and circuted Tasmania as available roads allowed and after some weeks of walking and touring we focused upon our intended trip to New Guinea. Houses we rented between our journeying would at times be "filled" with emerging insects namely the butterflies and moths, for I always seemed to have had an abundant supply of cocoons and pupae on board. On our trip north we called in at the 'Butterfly Farm' situated on Mount Tamborine just south of Brisbane. Garry Sankowsky made us feel at home as he proudly showed us around the area. His successful farming methods were evident by the enormous number of butterfly pupae suspended from the variety of foodplants growing in the hot-house.

We drove on to north Qld., and after some weeks of collecting, photographing, painting and writing notes we garaged our vehicle and flew to New Guinea. Shortly after arriving in Port Moresby we made our way north overland by trucks and 'buses' until reaching the Ecology Institute situated in the highlands of Wau, this was to be our base as we moved about the country. Dr Lineley Gressitt made us most welcome here and presented me with a book on 'Beetles of New Guinea' which he had only recently published. In between our sightseeing we spent some weeks in the grounds of the Ecology Institute (at one time a coffee plantation). Here native students and workers tended the large area of hills producing fruits and vegetable crops. Whilst learning reliable self-sufficiency through good farming methods and selling produce at the bigger market places, the native students were also studying the many crop-associated insects being reared in batteries of observation cages. We were assisted in so many ways during our stay by many people including the natives who were often eager to satisfy their curiosity in us at the same time. We had our backpacks and tents to carry and help was always appreciated. Lynn attracted an audience whenever she painted and she did a lot of painting. I did a lot of observing and photographing. We said our goodbye to New Guinea and returned to north Qld., where we once again reorganised and continued on our travelling. Lynn and I felt that we were a good match and married August 1978. In February 1980 our daughter Alice was born (natural home birth). We introduced Alice to the Australian Bushland and camping as soon as practically possible. This early introduction has proven to have been worthwhile, for Alice is a keen observer and has shown to have a real love of Nature.

Considerable work experience in various fields had accumulated during a long working-travelling project, and I skinned a position in the printing trade operating a two colour Davidson Press.

BEING WITH NATURE. (INVOLVEMENT WITH THE ARTHROPODS).

It would be fitting to mention the Australian Entomological Magazine (Edited and published by Max Moulds) (Now published by the Entomological Society of Queensland). It was through Max's Journal that I learned of the many available contacts in Entomology e.g. The Ecology Institute. and would like to acknowledge the help and assistance received ever since submitting my first paper to this journal in 1978; "The Tailed Emperor Butterfly in South Australia".

During early 1982, I felt that my interest in Entomology had evolved to a stage where I wished to share it more openly by more involvement with others interested in the subject. During that year I submitted an ink drawing of the Diamond Weevil, Chrysolopus spectabilis to the Entomology Section, R.Z.S. of N.S.W., on hearing that the Section was looking for a symbol or emblem for their newsletter. This drawing was accepted by Council and its president; Mr Clarry Chadwick wrote a letter to thank me for my efforts and also an invitation to attend future meetings. I accepted the offer and in fact since that time I have been greatly encouraged to pursue this interest with the arthropods more keenly than ever. Through association and involvement with this rapidly expanding society I have been assisted in many ways, particularly by Mr Clarry Chadwick and Mr Rudy Mulder.

During March 1983 I had the good fortune through a friend, in being introduced to a publisher who was mostly interested in publishing Australiana. I presented drawings, photographs and notes to him and shortly afterwards, the book, "One Step Closer, Please" resulted. The title being created by both Lynn and I. In June of that year, our son Daniel was born and he too was introduced to the Australian Bushland and like Alice, he is also keenly interested in Nature.

February 1984, Mr Geoffrey Holloway, Technical Officer of the Entomological Department of the Australian Museum initiated to introduce teaching entomology at Sydney Technical College. His courses; "INSECT IDENTIFICATION" and "INSECT COLLECTING AND PRESERVATION" have proved to be very popular and have continued to be so. Having attended each year I have found Mr Holloway's teaching to cover a most comprehensive range of study embracing the subject of entomology. Through his methods of using succinct anecdotes to deal with some particular aspect of the subject, the student finds the studies both enlightening and entertaining with a good chance of retaining the material concerned. Advanced courses have been introduced and both the practical and theory presented over this period have enormously helped in broadening my appreciation of the vast scope of this subject known as entomology. It is great to see the professional entomologists assisting and encouraging the amateurs and Geoff is among the few professionals leading in this regard. Professional and amateur working together in a potentially perfect exchange of activities.

MORE INVOLVEMENT THROUGH THE INSECTS.

In this lifelong quest of studying these curious creatures named insects, I have been led into finding many wonderful friends and acquaintances. Strangely enough the insects were the means of leading me to some of my favourite stories and songs during childhood, e.g. Alice in Wonderland and the caterpillar puffing away on the hookah-pipe while presenting Alice with some teasing questions. Alice was learning that every question cannot be answered through reason alone. The story of Pinocchio with Jiminy Cricket serving as his conscience and steering Pinocchio in the right direction, always prompting him to look before leaping.

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The story of the Locust and the Ant and how the Locust learnt through the pain of starvation that he needed to take care of himself by a balance of work and play each day. Peg Maltby's series of children's books "Pip and Pepita" with the emphasis on "realism" and "tell it like it is". The Butterfly Ball", and so on. It was through this interest with Nature that highlighted my schooldays.

In more recent years, it is through this interest which has led me being invited to numerous schools to share Nature Study with the children, from kindergarten to sixth grade. This has taken the form of Nature walks, creative-writing workshops, slide-viewing with an appropriate theme, drawing on the boards and inviting the children to participate.

Interest in entomology indirectly led me in being commissioned to illustrate a children's book of Hans Christian Andersen tales. This interest in entomology has led to a further appreciation of photography, drawing, painting and writing thus leading me to realise any abilities or skills acquired in this regard are tools for exploring and secondary to my love of Nature. One thing that does stand out amongst all of this, is that I have discovered many choice locations and campsites in Australia that I would not have otherwise experienced. The insects have certainly inspired my love of travel. But above all else, this lifelong association with insect study has led me to an appreciation of Nature as a whole and our continued existence is directly hinged upon this fact of life being recognised by humanity as a whole, the remaining wilderness must be preserved, for all is interdependent and the habitats to sustain this system are vitally necessary. In our continually trying to outwit and conquer Nature, we have weakened our life supportive home.

MEDIUMS FOR COMMUNICATION:

PHOTOGRAPHY in all of its forms has given us incredible insight into the world around us. Regardless of its form the camera continues to have a profound impact upon us all. It is rapidly evolving our awareness of the ecology of our planet. Just taking one form of photography, the transparency magnified upon a screen. A first class colour slide can create the illusion of reality that will not be matched in book illustrations or colour prints. It needs emphasising that when choosing a transparency film, a slow film compatible with the demands of the given subject is to be preferred for best results. ASA:25 and ASA:64 to ASA:100 are certainly ideal for close-up nature photography.

Great awareness of the life supportive system is brought into sharp focus by those people who are willing to share their findings with public viewing. Television has been and will continue to be a useful tool in communicating the discoveries to broad audiences.

"A Watcher of Nature" can become 'lost' in the experience of total attention, not simply in a passive way, but engaged with Nature, 'one with Nature', for there is no substitute for directly perceiving a thing in its own right (its dignity). It is through this form, of creatively approaching the subject, that results in seeing what one is looking at.

LINE DRAWING as a medium is also a powerful form of communicating ideas, be it a simple sketch to computer-art in 3D. However, pen and ink illustrations do work well, for they will give an exact replica of the original when publishing.

BEING WITH NATURE. (INVOLVEMENT WITH THE ARTHROPODS).

With pen and ink drawings the reproduction is not a translation in half-tones, but a repeat copy, line for line, dot for dot of the original work. The intensity of indian ink stands out from the whiteness of the paper and can result in a sparkling drawing indeed. Additionally, a black and white illustration can have the viewers mentally fill in their own colours, thus more involvement and greater communication can result. Drawing is a very engaging pursuit and as a discipline alone, it is well worth practicing. A line drawing in black and white is a severe exercise in economy of means and has you making a firm decision on whether a detail is, or is not present. Shading and effects of roundness can often be indicated rather than portrayed and the simplest methods are usually the most successful. To shade a bigger area two standard methods are normally used: stippling and cross-hatching. Stippling an area means to fill it in with dots of varied size and spacing. Cross-hatching is using lines which cross one another of varied thickness and spacing. The principle of vitality is the asset which goes into much of this work and comes not so much from the actual hand as from the heart, the time going by unnoticed as with any labour of love.

PASS IT ON

WRITING: Writing as a medium is the artistic expression of what is thought, felt, remembered or imagined. Sooner or later you will have some information that you will feel compelled to want to share with others. Especially in regards to studying insects, you are never far from discovering something that no one has yet brought to light. A card index system is a fine way to collect your facts in an orderly manner when filed away properly. Arranged and assembled with a definite purpose in mind can make things so much easier when you get to the point of publication and a review of a small group of insects or a monograph of a family can build itself up painlessly. Good planning is essential for detailed insect study particularly so when seeking a specific aspect of the life history of a nominated species. The time of the year, the time of the month and the time of the day needs planning and this means knowing your subject. Even with the best of planning, it may take years of following through with persistence and patience at all times creating opportunities to acquire further insight into the subject being studied. Maintaining a standard of involvement with a hobby takes a consistent effort and requires being true to one's goals regardless of whatever comes and goes in one's life. Of course when such dedication is fed through enthusiasm and the supportive gesture of encouragement from your fellows, much can be achieved and aligned.

EDUCATION AND TEAMWORK

Having visited a number of schools during their 'Bookweek' and 'Education Week', I have found that many children are looking for guidance and encouragement to learn all they can about the realm of Nature. Because our children are the seeds of tomorrow's world, I think that the one goal in particular that needs emphasising in education is that of continually refreshing the consciousness so that they remain aware of the beauty and the wonder of life. I think that a successful way of teaching any subject be it mathematics, languages, whatever, is to guide people into the aesthetics involved.

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We need not feel overwhelmed by our imagining that everything is being or has been done by somebody else or a machi ne, because each of us are experiencing life from a potentially unique viewpoint. And because of this, it is in the power of anyone of us to contribute our thoughts, experiences and ideas to the collective pool of knowledge. Its called teamwork, where each of us win by each individual' input, where any advantage to one would also be an advantage to the other.

It has taken us two hundred years to appreciate the forests in their own right, ironically at the point where they are threatened by extinction through exploitation. This long coming appreciation for the need of our wilderness is a response of the heart and a faith in the continued survival on this planet. Will dire necessity also prompt us into controlling our population? As we educate ourselves, we confront the fact that our earth's resources are not inexhaustible. We are faced with the Knowledge that our planet is our home, but its' garden is badly neglected. This plundering and indiscriminate misuse for short-term monetary gain by the short sighted few has had its' run. Money can be created by simply printing more. However this does not apply to the trees, the creatures the atmosphere and everything that really counts. RESPONSIBLE GARDENERS WANTED and all of the carers that can be found. The essential ingredient to our creating a sane environment is this attitude of simply caring. Along with this teamwork attitude is the appreciation of the fact that this planet is not solely ours to destroy, but the home of innumerable lifeforms which indeed support our very existence

On writing this essay it is interesting to note how it has evolved from a young boy's viewpoint in the back garden to a more matured viewpoint through involvement with the many people willing to help and encourage my efforts along the way.

However despite this heavy and philosophical appreciation of the above, the real joy for me is being involved in all of this awareness that is now taking place. I would like to take this opportunity to thank the Entomological Section of the R.Z.S. of N.S.W. for a recent invitation to share and rehearse this material. I fully appreciate the gesture of Council in nominating me for the Zoo Le Souef Memorial Award during 1986. My contribution in the field of Amateur Entomology in Australia was awarded in 1987 and of course I acknowledge all assistance extended to me along with encouragement to do better still, to all those concerned, especially to a dear friend and father who passed away on the 11th Sept 1988.

"Thank you for all of your encouragement and help Dad".

Bert Brunet.

The new cover illustration from the February edition of Victorian Entomologist was kindly supplied by N.B.Quick. He also provided the accompanying information as follows.

ILLUSTRATION of Epicoma melanospila (Wallengr.), female.

(Lepidoptera: Notodontidae auctt.)

At rest, the satiny-white forewings with ochre-dotted black borders, and a prominent central black spot, make this common moth a conspicuous insect on spring and summer evenings. Forewings of the male are similar, but traversed by a dark diagonal stripe. Eggs are covered by furry scales from the abdomen of the female moth. The gregarious, densely hairy larvae feed on eucalypts, and pupate under bark, often near the base of the tree



KELVYN and LAURIE DUNN recently demonstrated their data base on Australian butterflies to the Entomological group meeting at the Plant Research Institute at Burnley. The demonstration included the facilities for rapid data entry, and a high speed search to retrieve data that matches up to 38 selection criteria.

Personnel attending the meeting described the data base facilities as having great potential for Museums and similar institutions. A similar response was received from an earlier demonstration at the ANIC, Canberra.

The data base of over 42,000 records is processed using an IBM compatible computer with a hard disk, 640k of normal memory, and 1280k of extended memory.

Kelvyn and Laurie would be interested to hear from any collectors who would like data from their collection included in the data base.

RUSSELL and CAROL MAYO spent enjoyable fortnight in far north Queensland during April. Sunny days were conspicuous by their absence, but despite this some good collecting was achieved at the usual haunts. Some local collectors were visited. Russell reports that there are now four butterfly farms north of Townsville.

RAY and NOLA MANSKIE had a surprise visit from Russell and Carol Mayo on their return to Narara N.S.W. With the very wet season this year in south eastern Queensland, Ray has made some unusual captures and observations, including one species normally found only north of Rookhampton.

ROD EASTWOOD has once again been waving the net with Ray Manskie in the last few months and during one weekend in February, recorded over 70 butterfly species between them in the Maryborough district. Rod has also been hunting out *Anisynta oxynoe* in the Tenterfield district of N.S.W. and various browns in Bunya Mountains region during Autumn.

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HUGH BOLLAM of Perth reports that the drought in the Stirling Range had reduced the resident population of *Ogyris oroctes* so much that without the aid of "27 foot" extensions to his net he would have been unlikely to secure any adults this season. Hugh is planning another butterfly collecting trip to the Exmouth area of Western Australia early next spring.

MAX MOULDS is hopeful that his Cicada book should be on the market by Christmas. "Gallia" have been corrected and after he has made a few final amendments, will be sending the manuscript to Singapore for printing.

Max had a very successful Cicada trip to Western Australia early this year, but collecting was not as profitable in western NSW, Victoria, and South Australia.



THE AUTUMN OF 1989 A FAVOURABLE SEASON FOR EASTERN NSW BUTTERFLIES.

Andrew Atkins, 45 Caldwell Ave., Dudley. NSW. 2290.

Many Lepidopterists will have observed the rapid population explosion of Pierid butterflies during favourable seasons in eastern Australia, for example the Caper White (Anaphaeis java teutonia) that at times swarms in migratory flights in spring.

This year has been such a season for Eurema hecabe phoebus. The little yellow butterfly has been observed in considerable numbers this autumn throughout the northern and central-eastern New South Wales. At Grafton last month (March), I saw a few female E. hecabe laying eggs on a small unidentified legume growing in a vacant lot beside a service station. One of these plants was up-rooted, and potted when I returned to Newcastle. About 0.5m high and the shape and size of the average window box plant, this legume has produced, to date, 13 pupae and 58 mature larvae of E. hecabe just 2 weeks later! in spite of heavy infestation of black aphids.

Hypolimnas bolina nerina has also made a notable (though scattered) appearance this year on the central coast. This species has been rare in the Newcastle area for several years. Hypolimnas misippus also made an appearance at Merewether, where a male was collected on a knoll close to Newcastle City. Danaus affinis affinis and Danaus hamatus hamatus were also seen feeding on Lantana flowers along the Hunter River. Some of the larger Cassia trees in the suburbs of Newcastle harboured populations of Catopsilia pomona pomona, and on one tree I counted 34 empty pupal cases. This species is generally seen only sporadically in Newcastle. Other species such as Polyura pyrrhus sempronius and Hasora khoda haslia were in such numbers this year as to cause considerable damage to their foodplants (Acacia and Wisteria respectively) growing in suburban gardens.

OBSERVATIONS OF SWARMING FLIES (Diptera: Chloropidae)

W. j. Faithfull, RMB 3263, Mansfield, Vic. 3722.

During a ten day period at the end of February 1988, ^{*} immense swarms of small insects were observed in the Wattle Range area near Tolmie in North-East Victoria at an elevation of about 900m. Weather conditions during this period were generally hot and dry after a long period of settled similar conditions. The areas in which these insects congregated comprised bracken/blackberry/Acacia understorey subdivided by large Eucalypts. (white gum and peppermint) During the day the insects rested and fed in the understorey and commenced swarming approximately one hour before sunset. The swarms gradually gained height and then flew above the treetops in patterns similar to the dust trail of a sizeable willy-willy. In fact the first sighting was mistaken for such dust trails. The swarms were of such magnitude as to be clearly visible to the naked eye at a distance of about one kilometre. The insects were subsequently identified by Drs B.P. Moore and D. Colless of the CSIRO Division of Entomology as swarming flies, Chloromerus striatifrons (Becker). Dr Moore had in 1976 reported sighting similar swarms, in the Canberra district (Australian Entomological Magazine, Volume 3, Part 2, pp21-2 July 1976).

*Note. Similar but smaller swarms, over a short period were observed in the same area during late February 1989.

A DESCRIPTION OF THE EGG OF ANTIPODIA CHAOSTOLA (MEYRICK) (HESPERIIDAE: TRAPEZITINAE).

Andrew Atkins, The Hunter Institute of Higher Education, Waratah, N.S.W. 2298.

In the establishment of the Australian skipper butterfly genus Antipodia (Atkins, 1984) an egg supposedly of Antipodia chaostola (Meyrick) was illustrated from an egg-shell that was found attached near the larval shelter of this skipper in the Grampian Mountains, Victoria. In 1987 I received an egg, extracted from a female A. chaostola collected near Moe, Victoria by Mr Russel Mayo. Since then, I have obtained eggs of both Oreisplanus munionga (Olliff) and Oreisplanus perornatus (Kirby). These Oreisplanus eggs and that illustrated in 1984 are very similar in structure having an oval shape, almost smooth with numerous fine verticle ribs. (40-50)

The extracted egg of A. chaostola has fewer and more prominent ribs and is described thus; -slightly oval in cross-section, pale green to white with obscure reddish-brown dorsal area; large diameter of 1.4mm; 36 moderately shallow vertical ribs.

This egg morphology compares very well with that of Antipodia atralba (Tepper), and it seems likely that the egg shell from the Grampians was from O. peronatus or Hesperilla chrysotricha cyclospila (Meyrick & Lower) which also has a structurally similar egg and occurs in similar areas to A. chaostola in the Grampians.

Acknowledgements. I thank Mr R. Mayo for obtaining the egg of Antipodia chaostola.

Reference.

Atkins, A.F., 1984. A new genus Antipodia (Lepidoptera: HesperIIDae: Trapezitinae) with comments on its biology and relationships. Aust. ent. Mag. 11(3) 45-58, figs 1-47.

Q U E S T I O N .

Has any reader solved the problem (or read of a collector/observer solving the problem of observing hill topping butterflies (on hills) because these hill toppers mostly fly about tall eucalypts on the knoll, close observation is difficult unless the dangerous exercise of tree climbing is performed. Has some sort of bosun's chair or alternatively a simple but strong viewing platform been developed?

J. Burns 274 Church Rd Templestowe 3106.

An update on Insect Collections and Pesticides
Kelynn Gunn, Plant Research Institute, Burnley, Victoria

Collections of insects are prone to attack by various pests, and most collectors are familiar with unwanted guests such as cockroaches, silverfish, museum beetles (*Anthrenus* spp.) and psocids (often called booklice because of their association with old books). Insect collections in the moist, coastal regions of Australia are particularly prone to insect attack and usually one's immediate response is to increase the amount of pesticide in the storebox or drawer to combat the infestation. The practice of increasing concentration is no longer so desirable, since many pesticides are proving more dangerous than were anticipated in the past. It is of concern that only 10 percent of the pesticides used to combat psocids in libraries in the USA had been fully health tested by 1984 (Davis, 1985). Some insect fumigants, which only about a decade ago were considered to be relatively safe or said to have a low toxicity to humans, are now regarded as dangerous; ethylene oxide, carbon disulfide and carbon tetrachloride are some examples.

In a recent report titled "Pest Control in Herbaria", Hall (1988) of the University of Cape Town, South Africa detailed a number of different insecticides and fumigants, some of which are relevant to insect collections.

As naphthalene (mothballs or flakes) is an eye and skin irritant to some people, Hall (1988) recommends that cabinets should be sealed and working space well ventilated. Direct eye contact with dust has produced eye cataracts. Exposure is increased when the repellent builds up high vapour concentrations in closed store boxes. Eye irritations can occur when concentration reaches 15 parts per million in the air. Other effects are dermatitis and skin allergies in some people. Inhaling high concentrations may result in destruction of red blood cells. A person suffering a genetic disorder of glucose-6-dehydrogenase deficiency may develop severe haemolytic anaemia at low levels of exposure. Naphthalene is not mutagenic so there seems little risk of cancer.

Hall suggests that gloves and a respirator are essential for paradichlorobenzene (PDB), and the collection must be well ventilated, since at 20 degrees Celcius, concentration in closed store boxes is well above the safe level, and precautions are necessary whenever the boxes are opened. PDB should only be used in a fully sealed container. Long term exposure can result in dermatitis, loss of appetite, nausea, vomiting, jaundice and liver cirrhosis, and there are a few reports of kidney and liver damage. It is also known to interfere with the formation of reproductive cells (during meiosis), and has been used for this purpose in genetic research.

There seems to have been an increase in the use of dichlorvos impregnated strips in private insect collections. These strips must be handled with gloves and users repeatedly opening sealed cabinets should wear a gas mask, since a saturated vapour rapidly builds up. Unlike naphthalene and PDB, which should be used with caution, dichlorvos is rated as poisonous. The insecticide damages neurotransmission in the central nervous system. Mild symptoms include headaches, blurred vision, nausea, vomiting and diarrhoea. Hall states that possible long term effects are slowness of

thinking, memory defects, irritability and delayed reaction times. Apart from health considerations, Dichlorvos is known to fade the colours in butterflies and moths, and in a humid atmosphere, forms an acid which can corrode metals. Old specimens on brass or similar pins are obviously at risk.

Hall (1988) also details the effects of other pesticides including barium, fluorosilicate mixture, chlorpyrifos, ethylene oxide, gamma-BHC fumigant, lauryl pentachlorophenate, mercuric chloride, methyl bromide, phosphine, pyrethroids, silica aerogel dusts and thymol.

The most effective storage system for collections are metal drawers enclosed in a metal cabinet. This type of design is used at the ANIC, Canberra. Metal provides a drier and less favourable environment to insect pests than the conventional wooden cabinets.

References:

Davis, H. (1985) Preservation using pesticides : : Some words of caution. Wilson Library Bulletin, February 1985: 386-431

Hall, A.V. (1988) Pest Control in Herbaria. Taxon 37(4): 885-907



Pen

Replies to the six Entomological(Butterfly) questions placed in the April issue are pleasing though limited. Question 1 and Q2 have been answered by Mr E.D. Edwards of the CSIRO, Canberra. His full page reply is printed on the following page. Q3 has drawn a verbal answer from Michael Braby via Pat and Mike Coupar. Michael observed two swordgrass brown (*Tisiphone abeona albifascia*) larvae living on thatch swordgrass(*Gahnia radula*) near Healesville Victoria, february 1989. Red berried swordgrass (*Gahnia Sieberana*) which is the usual foodplant in central Victoria was present at this Healesville site but only in very limited numbers. Michael subsequently bred the second larva through at home on refrigerated thatch swordgrass. It is still unclear which mechanism(s) limit(s) the efficacy of thatch swordgrass to act as a suitable foodplant, whilst its red berried first cousin is eagerly sought by the butterfly.

Q4 is unanswered to date however sparse facts have come to light pertaining to Q5(How far can skipper butterflies range from their birthplace.) Again one Michael Braby has observed a lone bright shield skipper(*Signeta Flammeata*) hilltopping at Gresswell hill Bundoora, Melbourne. The nearest known breeding location is the Plenty gorge over 5 km to the NE. Michael has also observed *Symmomus* skipper(*Symmomus Soma*) in his backyard at Eltham south. The nearest known *Lomandra longifolia*(mat rush) supporting *symmomus* colonies is 2km distant.

Other entomologists will no doubt have various personal revelations of skipper flight wanderings representing range from food plant. In particular, the hope is encapsulated in this question that as foodplant occurrences become more isolated under the "rape" of progress , limited butterfly colonisation may still be possible!

Question for JUNE issue.

Q7 Has the entomology of French island undergone evolution in a separate direction to that of mainland cousins or is limited exchange of gene pools still occurring(Since the land bridge to Tasmania was submerged 10,000 yrs ago evolutionary diversion is evident in several species.

CSIRO

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17 April 1989

Mr J. Burns
274 Church Road
Templestowe 3106

Dear John,

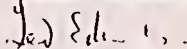
I noted with interest your questions posed in the latest Vic. Ent. Although no longer a member I do follow the journal closely.

Perhaps I could be permitted 2 brief comments.

Skipper butterfly shelters are a neglected field. Could I draw your attention to a paper Edwards, E.O.E. (1958) Proc. R. zool. Soc. N.S.W. 1956-57:66-69 which describes the construction of a shelter by Mesodina halyzia. The loops found in some leaves are due to the incorporation by the larva of young still-growing leaves in the shelter. Sedge leaves grow at a meristem at the base of the leaf blade (ie they grow from the bottom) and so if a leaf grows after incorporation in the shelter it forms a loop. It is possible that the twist found in some shelters also has an explanation in the growth of the plant rather than the activities of the larva.

There are no recognised extinct Australian butterflies. Species which have become extinct have done so before they were discovered. One possible exception to this is Hesperilla bifasciata Tepper. The species was poorly described and crudely illustrated by Tepper (1882) Trans. Proc. Rep. R. Soc. S. Aust 4 p.32, pl2. It has never been recognized since and the description is good enough to eliminate all known butterflies. It could possibly be a castniid moth but Tepper in the same paper identified and described castniids correctly. To quote W.H. Evans "the description and figure apply to no known insect".

Yours sincerely,


E.D. Edwards.

RECENT ARTICLES OF INTEREST (CONTINUED)

E. Zillman, Observations on the bird-dropping spider. Qd.Nat. 28(5-6):28-31. Calaenia kinbergi, Araneidae.

G.B Monteith & D.K. Yeates, The butterflies of Mount Moffatt and Carnarvon National Parks, Queensland. Qd.Nat. 28(5-6):14-22. Mt Moffatt 47 spp. Sept. 1986, 59 spp. Dec. 1987, total 70 spp.; for both areas 81 spp., listed by month of capture & 12 locations. New locals. & range extensions: Trapezites phigalia philus, Taractrocera papyria, Lucia limbaria, Acrodipses brisb., A. arcana, Hypochrysops byzos, Ogyris ianthis, Jalmenus evagoras eubulus, Neolucia agricola (plus new foodplant Bossiaea rhombifolia). Very interesting discussion butterfly diversity of inland Qld. & n. NSW.

G.B. Monteith, The Dodds of Kuranda - their mark on Australian entomology. Ent.Soc.Qld. News Bulletin 16(4):43-52, Jul. 1988. Biographical info. mainly on Frederick Parkhurst Dodd (1861-1937) but also his children Walter (-1965), Frad Jr. (-1962), Alan, Colin, Elizabeth & Katherine.

Christopher Joyce, Killer bees: the case for the defence. New Scientist 121(1651):36, 11 Feb. 1989. The fierce reputation of this strain of Apis mellifera now invading the USA is exaggerated. Although more aggressive than European strains they may be better pollinators and produce as much honey with appropriate beekeeping techniques. They are also resistant to Asian mite, Varroa jacobsoni, a destructive hive pest.

Strong counter-attack as plague of crickets hits the suburbs. QTV9 television News, 7 Feb. 1989. Millions invaded Melbourne's inner suburbs overnight. South Melbourne's City Road: "crickets all the way down the street", Brunswick, Richmond. Reptile keepers from the Zoo took large numbers for feeding and breeding. Plague likely to remain for days.

Bellamy C.L. (1988). The classification and Phylogeny of the Australian Coroebini, Bedel with a Revision of the Genera Paracephala, Meliboeithon and Dinocephalia (Coleoptera: Bupestidae: Agrilinae) Invertebrate Taxonomy, 2, 413-453.

Barker S. (1988) Contributions to the taxonomy of Stigmodera (Castiarina) (Coleoptera: Bupestidae) Transactions of the Royal Society of South Australia 112, 133-142

Graham J Goldsworthy & Colin H Wheeler (Editors) Insect Flight 352pp., CTC Press Inc., Jan. 1989. \$A 268.75 Mechanics control, ecology, behaviour, physiology and biochemistry of flight migratory flight, swarming, foraging, flying pest control.

Aust. sheep blowfly maggots in human wounds in Qld hospitals ABC Radio PM, 6 Mar. 1989. Dr Lionel Lucan estimates one case a week in the state, "not a serious problem and "no reflection on the way the hospital is run". Infections have been found for many years but medical administrators don't like to admit it!

SHORT NOTES ON CHELEPTERYX COLLESI (ANTHELIDAE)

Pat & Mike Coupar, 143 Brackenbury Street WARRANDYTE VIC. 3113.

On 11th April 1989—a cool and clear evening at around 9.00 pm, we observed at the M V light, our first Chelepteryx Collesi (Anthelidae) for the year. It was a male and in very good condition, with a wingspan of 135 mm. Females are even bigger and have been known to reach a wingspan of 180 mm. The moth is a chocolate brown colour with wavy markings on the wings. The hind wings have an attractive orange and brown scalloped pattern.

We have not reared this species through, although we would very much like to photograph its life cycle. However we have never had a female to the light neither have we found any larvae in the bush. The larvae feed on species of Eucalypts and we would be interested to hear from anyone who has reared this magnificent moth.

Reference

I.F.B. Common 1990 CSIRO Insects of Australia. Melbourne Uni'Press

OUTSTANDING SUBSCRIPTIONS REMINDER NOTICE

All annual subscriptions for the 1989 membership year are well and truly due. Rates are listed on the front cover and should be forwarded to the treasurer Gordon Burns, 3 Inglis St., Mornington 3931. AUGUST ISSUE of VIC ENT WILL ONLY BE SENT TO FINANCIAL MEMBERS

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NOTICE

Jack hasenpusch of P.O. Box 26 INNISFAIL, North Queensland, 4860. is an amateur entomologist living in a rainforest area (near Innifail). He is very interested in exchanging beetle specimens with other collectors. He is particularly interested in Lucanidae. He says dont hesitate and write to him if anyone is so inclined.

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	DIARY OF COMING EVENTS
FRIDAY 16 JUNE	-General Meeting. (Short talks by members)
FRIDAY 21 JULY	-Council Meeting

